

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

- C1
1. (currently amended) A method of ~~producing~~ preparing a therapeutic peptide ~~[[s]] suitable for preparation as a vaccine~~ ~~[[s]] in treating a disease in the prevention of human disease caused by a protein, the method comprising the steps of:~~
 - a. identifying a protein responsible for causing a human disease;
 - b. identifying ~~a signal oligopeptide~~ an amino acid sequence ~~[[s]] within the structure of the disease-causing protein, wherein the amino acid sequence signal oligopeptide[s] representing the amino acid sequence of~~ represents the maximum hydrophilicity ~~[[of]] within the protein; and~~
 - c. synthesizing a peptide having the amino acid sequence vaccine oligopeptide, ~~the vaccine oligopeptide having amino acid sequences corresponding to the amino acid sequences of the signal oligopeptides of maximum hydrophilicity; and~~
 - d. administering the peptide to a human to elicit an immune response in the human against the peptide.
 2. (previously presented) The method of claim 1 further comprising a method of identifying a signal oligopeptide sequence within the structure of the disease causing protein, the signal oligopeptide representing the amino acid sequence of maximum surface probability of the amino acids in the disease causing protein.
 3. (previously presented) The method of claim 1 further comprising a method of identifying a signal oligopeptide sequence within the structure of the disease causing protein, the signal oligopeptide representing the amino acid sequence of maximum electrical charge of the amino acids in the disease causing protein.
 4. (previously presented) The method of claim 1 further comprising an evolutionary comparison method, wherein a species of animals in an evolutionary chain is selected to produce a different vaccine oligopeptide to the same disease causing protein.
 5. (previously presented) The method of claim 1 further comprising an optimization step, wherein the vaccine oligopeptide is manipulated through an amino acid residue substitution, amino acid deletion, or amino acid insertion, or any combination thereof, to produce an optimized immunogenic response in vaccinated humans.
 6. (previously presented) The method of claim 1 wherein the immunogenic response of the vaccine oligopeptide in humans is enhanced by repetition of the vaccine oligopeptides to form a linear polypeptide.

7. (previously presented) The method of claim 1 wherein the immunogenic response of the vaccine oligopeptide in humans is enhanced by repetition of the vaccine oligopeptide to form a cyclic polypeptide.

8. (previously presented) The method of claim 1 wherein the immunogenic response of the vaccine oligopeptides in humans is enhanced by coupling of a vaccine oligopeptide to an immunogenic protein or non-protein haptens.

9. (previously presented) The method of claim 1 wherein the area of maximum hydrophilicity is identified by a hydrophilicity determining algorithm.

10. (currently amended) A method of ~~producing~~ preparing a therapeutic peptide[[s]] suitable for preparation as a vaccine[[s]] in treating a disease in the prevention of human disease caused by a protein, the method comprising the steps of:

- a. identifying a protein responsible for causing a human disease;
- b. identifying a ~~signal oligopeptide~~ an amino acid sequence within the ~~structure of the disease causing protein, the signal oligopeptide representing the amino acid sequences of wherein the amino acid represents the~~ maximum electrical charge [[of]] within the protein; and
- c. ~~synthesizing vaccine oligopeptide, wherein the vaccine oligopeptide having amino acid sequences corresponding to the amino acid sequences of the signal oligopeptide of maximum electrical charge~~ a peptide having the amino acid sequence; and
- d. administering the peptide to a human to elicit an immune response in the human against the peptide.

11. (previously presented) A method of producing a therapeutic peptide as a vaccine in the prevention of human disease caused by a protein, the method comprising:

- a. identifying a protein responsible for causing human disease;
- b. identifying a signal oligopeptide sequence within the structure of the disease causing protein, the signal oligopeptide representing the amino acid sequences of maximum electrical charge of the protein;
- c. synthesizing vaccine oligopeptide, wherein the vaccine oligopeptide having amino acid sequences corresponding to the amino acid sequences of the signal oligopeptide of maximum electrical charge; and
- d. using an evolutionary comparison, wherein one or more species of animals in an evolutionary chain are selected to produce different vaccine oligopeptides to the same disease causing protein.